Meeting the Challenges of a Post–Crisis Universe of Risks

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Five questions on the development of the (re)insurance industry

I. **Are insurers and reinsurers responsible for the financial crisis?**

II. **How insurance and reinsurance will be impacted by the new solvency regulations?**

III. **Are insurance and reinsurance countercyclical to the general economic cycle?**

IV. **How to cope with the potential difficulties arising in the next phase of the crisis?**

V. **What are the long-term prospects for the insurance and reinsurance industry?**

I. Are insurers and reinsurers responsible of the financial crisis? (1)

The (re)insurance industry does not generate systemic risk

- The answer is basically negative: **insurers and reinsurers are not responsible for the financial mess**. They bear no responsibility in the build up of the credit bubble and its explosion. The insurance and reinsurance business has not been at the epicenter of the economic and financial crisis for four main reasons:

✓ Its **limited liquidity risk** (structurally positive cash flows, especially in P&C)

✓ Its **limited leverage** (debt ratios are low in the insurance sector)

✓ Its **limited off-balance sheet exposure** (“you get what you see”)

✓ Its **limited contagion schemes** (“insurers are not counterparts of other insurers”)

➢ The (re)insurance industry does not generate systemic risk, contrarily to what has been affirmed by some observers

I. Are insurers and reinsurers responsible for the financial crisis? (2)

- There has been **no failure of insurers of reinsurers** since the beginning of the crisis (but for one large insurer suffering heavy losses from its financial activities, not from its insurance activities)
- There has been **almost no government intervention** to bail out an insurer, a situation in sharp contrast with the banking sector
- The (re)insurance industry has **successfully passed a major and severe stress test** demonstrating the robustness of its fundamental business model and we should all be very proud of this achievement demonstration
- Therefore ongoing **financial reforms envisaged or implemented around the world should not be directed towards insurance or reinsurance**

I. Are insurers and reinsurers responsible for the financial crisis? (3)

- The question of the systemic nature of the industry is now clarified: the **insurance industry cannot per se generate a systemic risk**, even though some functions carried by insurers can be ways of propagation of a crisis

- The (re)insurance industry can of course be deeply **affected by bank failures and by market disruptions, dislocations and discontinuities**

- The insurance and reinsurance industry is not systemic; hence

✓ It should **not pay a specific tax** or contribution to cover government potential intervention to bail out the industry;
✓ **An additional capital requirement layer to cope with systemic risk is not necessary**;
✓ We could even add that the **insurance sector is contributing to financial stability**, notably by providing long term and stable resources to the economy

II. How insurance and reinsurance will be impacted by the new solvency regulations? (1)

- In the wake of the financial crisis, there is a worldwide debate on the need to establish new solvency rules for the financial services industry. The main issue is to promote more financial stability
- In Europe, Solvency II regulation is intended to further strengthen the robustness of the (re)insurance industry. It aims at evaluating a company’s economic position and performance through **a principle-based approach**
- Key implications for the industry are likely to be:
  - Overall, **Solvency II increases capital needs** significantly
    - Especially true of asset risk (e.g. equities)
    - As of today, capital needs could increase on average by 20% for Life insurance and 30% for P&C insurance, everything being equal
  - Solvency II gives a **key role to economic-based internal models**, which will promote risk management functions within companies. It is risk-based and favors an holistic view of risk management

II. How insurance and reinsurance will be impacted by the new solvency regulations? (2)

- Further implications for the industry are likely to be:
  - Solvency II captures **diversification benefits**…
  - … and will favor diversified and better capitalized (re)insurers
  - Solvency II encourages the **use of several reinsurers by ceding companies**
  - It will fuel **concentration among primary insurers,** notably to benefit from diversification benefits
  - When combining Basel II/Basel III and Solvency II**, the development of financial conglomerates will be slowed down**
- **Primary insurers will be significantly more affected by the new solvency regulations than reinsurers**:
  - Reinsurers will use their internal model for solvency assessment
  - The demand for reinsurance is likely to increase because of Solvency II

II. How insurance and reinsurance will be impacted by the new Solvency regulations? (3)

- Even though Solvency II is still a moving regulation which should be implemented by 2013, it will have **a major impact on the industry**, which will appear over time
- Today's discussion could lead to a **mutual recognition of insurance regulation**: the US on one side and the EU on the other side would consider "equivalent" the US RBC approach and the European Solvency II approach. This could pave the way towards a worldwide solvency regime. Hence the importance of the current debate on the calibration of Solvency II: the choice of parameters is crucial for all worldwide insurers
- However, even with the same solvency regime, **supervision and control still appear to remain fragmented in the US and in Europe**, carried on a state by state or country by country basis
- There is a global trend towards **a joint supervision for banks and insurance companies**

III. Are insurance and reinsurance counter-cyclical to the general economic cycle? (1)

P&C and Life insurance have suffered but much less than other industries

- Things appear to be different when we consider **P&C insurance on one side and Life insurance on the other side**, primary insurance on one side and reinsurance on the other side
- As far as P&C insurance is concerned, **the slowdown of the economy generally tends to affect the premium income** (and more marginally the level of claims)
- Less buildings and construction, less investment, less cars, less traffic, less inventories, also lead to a premium income slowdown, and in certain cases to a contraction of the insurance activity, especially if the recession was to last a certain number of years
- Having said that, when you look at the development of premium incomes since 2007, **the slowdown of the insurance sector is less pronounced than some other industries** which have experienced very severe contraction of their activity

III. Are insurance and reinsurance counter-cyclical to the general economic cycle? (2)

Increased demand for individual protection is offset by low interest rates and by the need to finance consumption

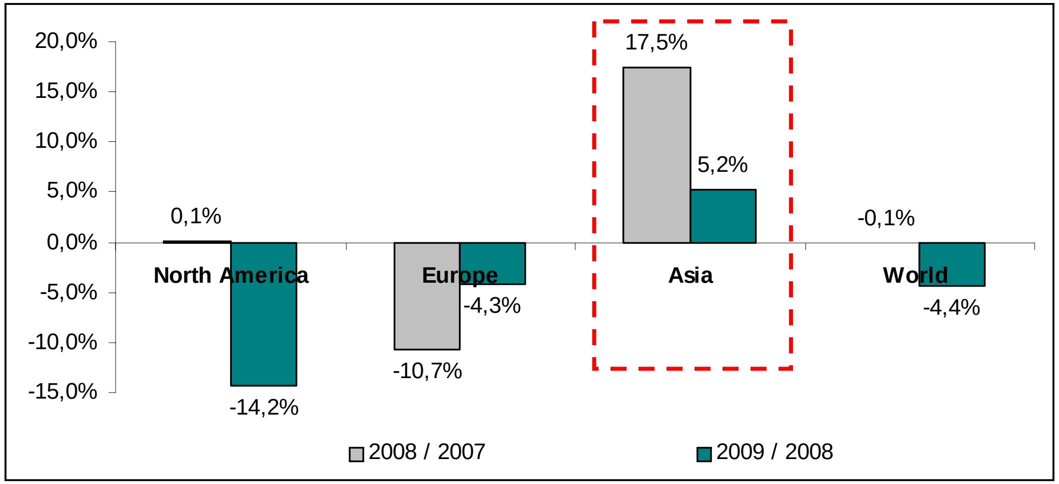
- As far as life insurance is concerned:
  - On the one hand, **the economic crisis can lead to an increase in the degree of risk aversion**, a rise in households' savings rate and therefore to an increase of life insurance demand. If households foresee the future fiscal consequences of an increase of public debt, they are likely to increase their long-term savings to compensate the tax burden to come. Furthermore they doubt about the long-term solvency of the Welfare state
  - On the other hand, in a time of financial crisis, accommodating monetary policies leads to **very low interest rates discouraging households to save** while concerns about the solvency of financial institutions can also prevent households from increasing their financial savings
  - Rising and lasting **unemployment can also force households to use their savings** to finance current consumption

III. Are insurance and reinsurance counter-cyclical to the general economic cycle? (3)

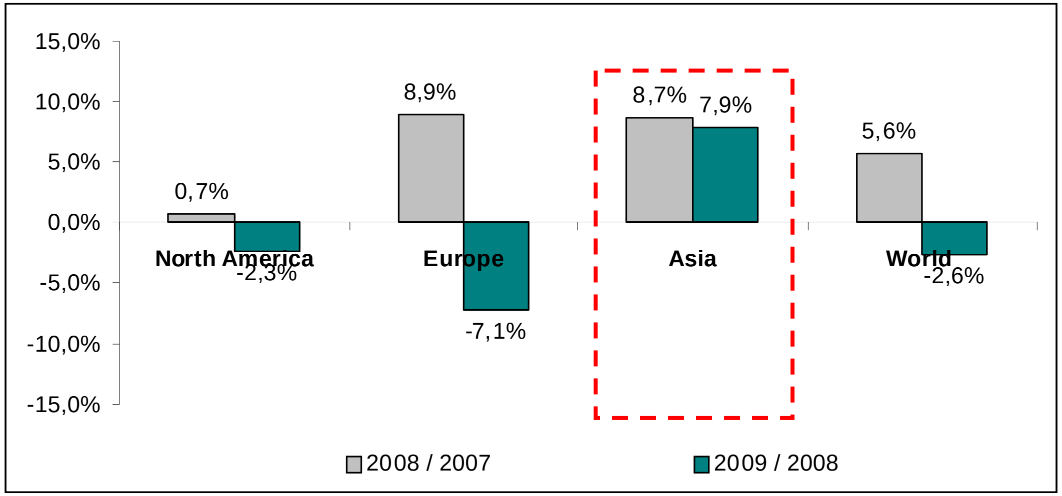
- Available data shows that:
  - On a worldwide basis, **global premium income increased by 2% in 2008 vs 2007 and decreased by 4% in 2009 vs 2008**
  - P&C premium income increased by 3% between 2007 and 2009, whereas Life premium income decreased by 4.5% over the same period. The drop of premium income has been especially marked in 2008 / 2009.
  - **The situation is very contrasted when looking at the different regions of the World**:
    - Asian Life AND P&C markets grew significantly over the period
    - Europe and North America markets decreased in all lines of business
  - This is **a confirmation of the fragmented market hypothesis**. Each insurance market tends to have its specific momentum, its genuine development, its own balancing forces
  - Besides, **reinsurance appears to be really countercyclical**

III. Are insurance and reinsurance counter-cyclical to the general economic cycle? (4)

Life insurance



Non-Life insurance



- In mature markets, the financial crisis has had a greater impact on Life insurance than on Non-Life
- Emerging insurance markets have suffered less from the financial crisis than mature markets
- Asian markets have continued to grow since 2007 both in Life and in Non-Life

Source : Sigma Economic Research

IV. How to cope with the potential difficulties arising in the next phase of the crisis? (1)

- The **crisis is not over yet** even if the worst phase seems to be behind us
- The **world economy appears more and more dual**
- There are **two basic economic and financial scenarios** for the US and the European countries:
  - The **progressive normalization scenario**; and
  - The **scenario of a potential inflationary shock and/or of an interest rates shock**
  - The very strong fiscal and monetary stimuli may indeed have adverse unintended consequences in the medium term
- **For the rest of the world – BRICs and emerging economies – economic growth would continue** but with potential imbalances
- **Insurers and reinsurers have to be very attentive to these potential developments** since they are likely to deeply affect both their solvency and their profitability

IV. How to cope with the potential difficulties arising in the next phase of the crisis? (2)

The global economy is facing a critical transition phase

2007 - 2008: phase I	2009 - 2011: phase II	~ 2012 onwards: phase III
Financial & economic collapse	**Key uncertainties in a stochastic world**	**Scenario of normalization**
Global recession	Shape of recovery in front of global recession (L, V, W or √)	Stabilization of economic activity? With increased inflation?
Liquidity crisis	Uncertainty on monetary policies	Normalization of monetary policies?
Low interest rates combined with exploding credit spreads	Uncertainty on interest rates developments	Increase of nominal / real interest rates? Decrease of credit spreads?
Financial market disruptions	Instability of exchange rates	Stabilization of equity markets?
Fiscal and social deficits	Sovereign debt crisis	Control of public deficits?
Emergency interventions of Governments	Tax and regulatory debates	Stabilization of regulatory reforms?

IV. How to cope with the potential difficulties arising in the next phase of the crisis? (3)

Many experts now anticipate a progressive economic normalization in the US and in Europe…

Scenario of normalization:

- ➔ **Stabilization of economic activity**, excluding double-dip and no systemic crisis
- ➔ Progressive **normalization of monetary policies**
- ➔ Progressive **control of public expenditures and deficits**
- ➔ **Progressive increase of interest rates**, decrease of credit spreads and de-steepening of the yield curve
- ➔ **Stabilization of equity markets**

IV. How to cope with the potential difficulties arising at the next phase of the crisis? (4)

But there are three open questions regarding this scenario

1) Sustainable recovery?

➔ Reduction of public spending and monetary base will likely slow down the economy

➔ Low credit activity weighs on growth

2) Public debt bubble?

➔ Current course of public deficit and debt could appear unsustainable

➔ We witness rising political difficulties to control public and social expenditures and to raise taxes

3) Accumulating inflationary pressures?

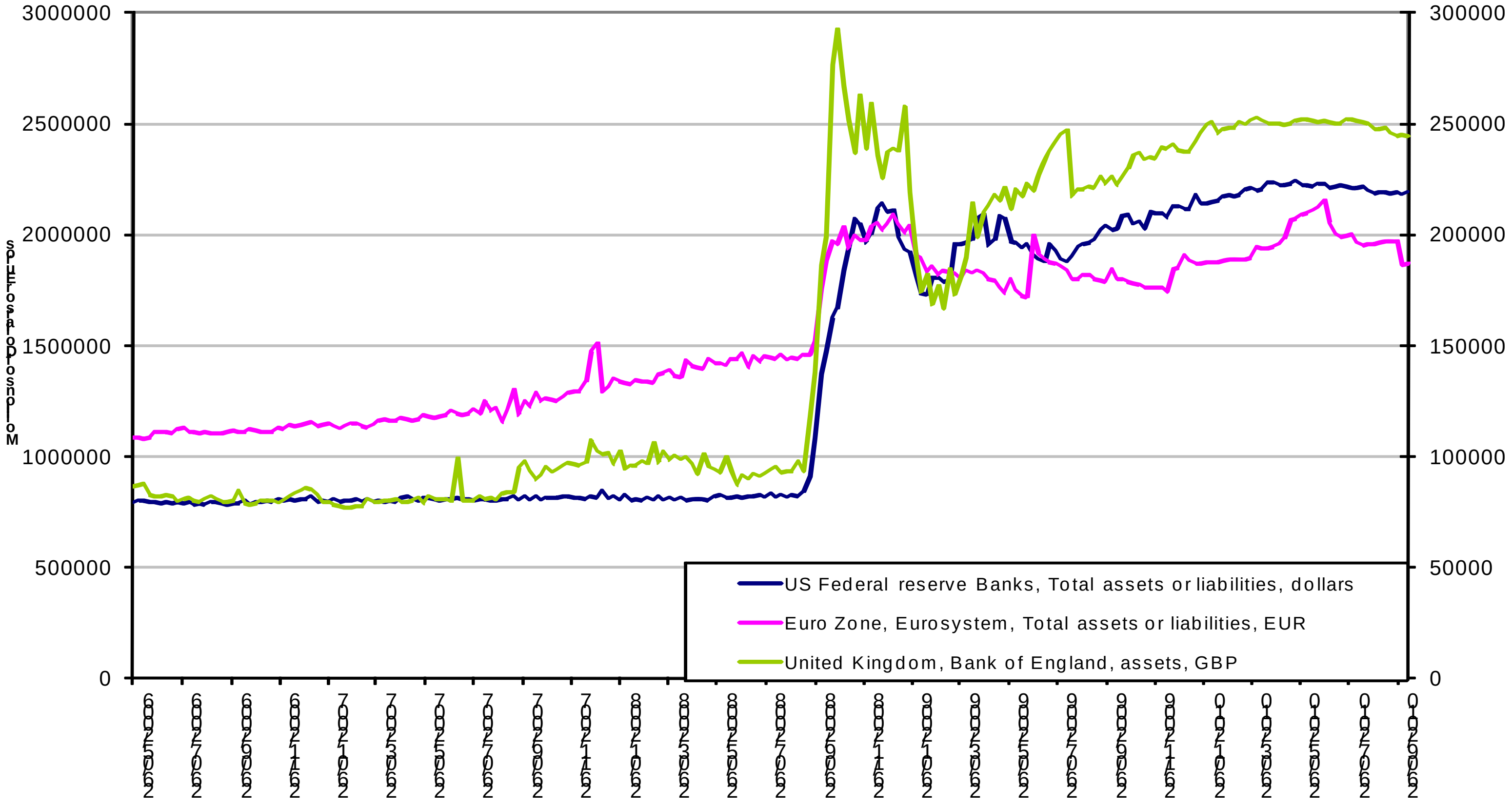
➔ Central bank money creation has been huge in the US and in Europe

➔ Globalization could potentially become inflationary

➔ Inflation already rising on certain markets and for certain goods

IV. The probability of an inflationary exit by 2012 is increasing

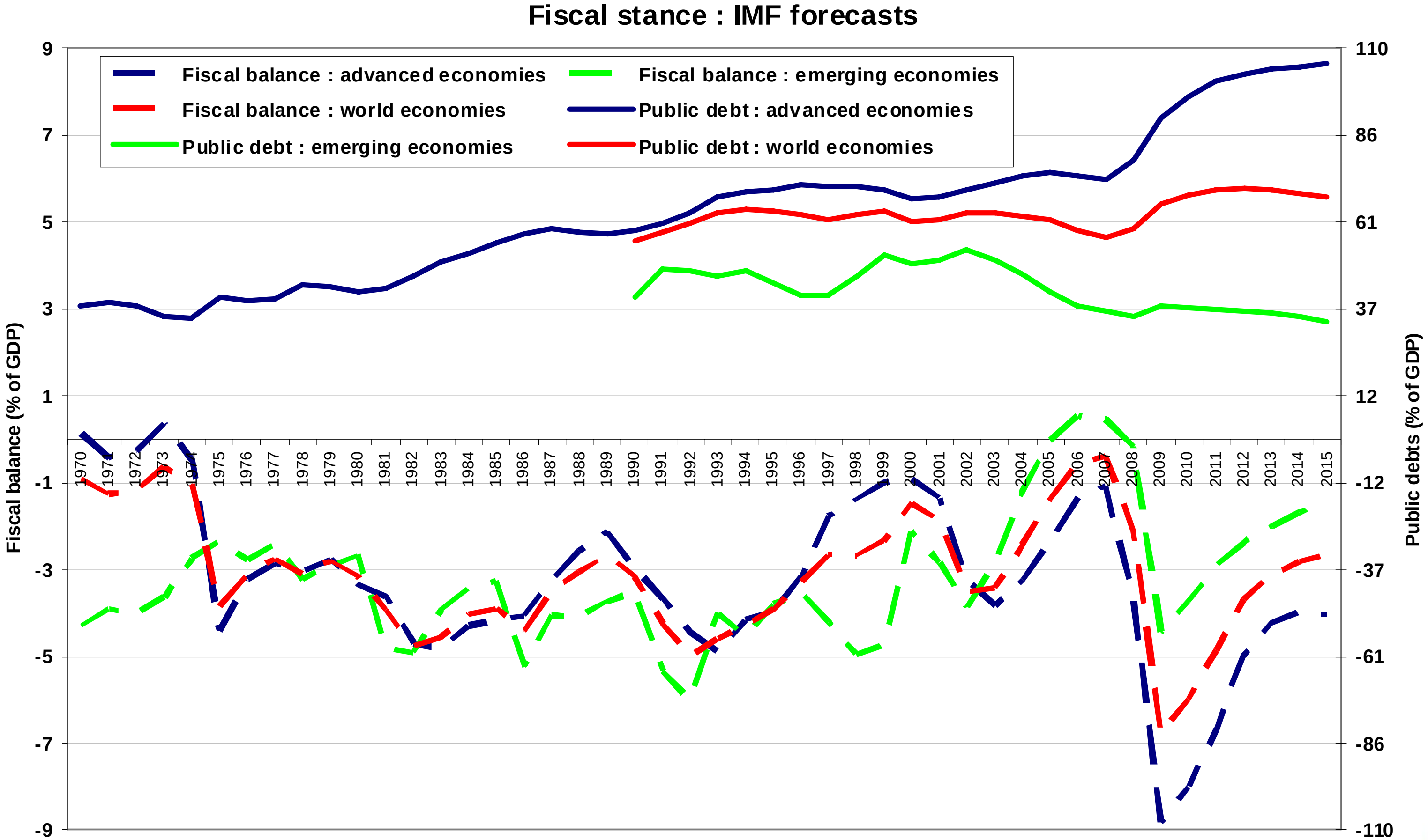
This is because of the huge amount of central bank money created to cure the deflation, bearing in mind that it is impossible to fully sterilize it



Source : Ecowin

IV. If not because of monetary policy, the probability of an inflationary exit by 2012 is rising

This is because of exploding public debt, which is likely to be partially monetized (as in the US)

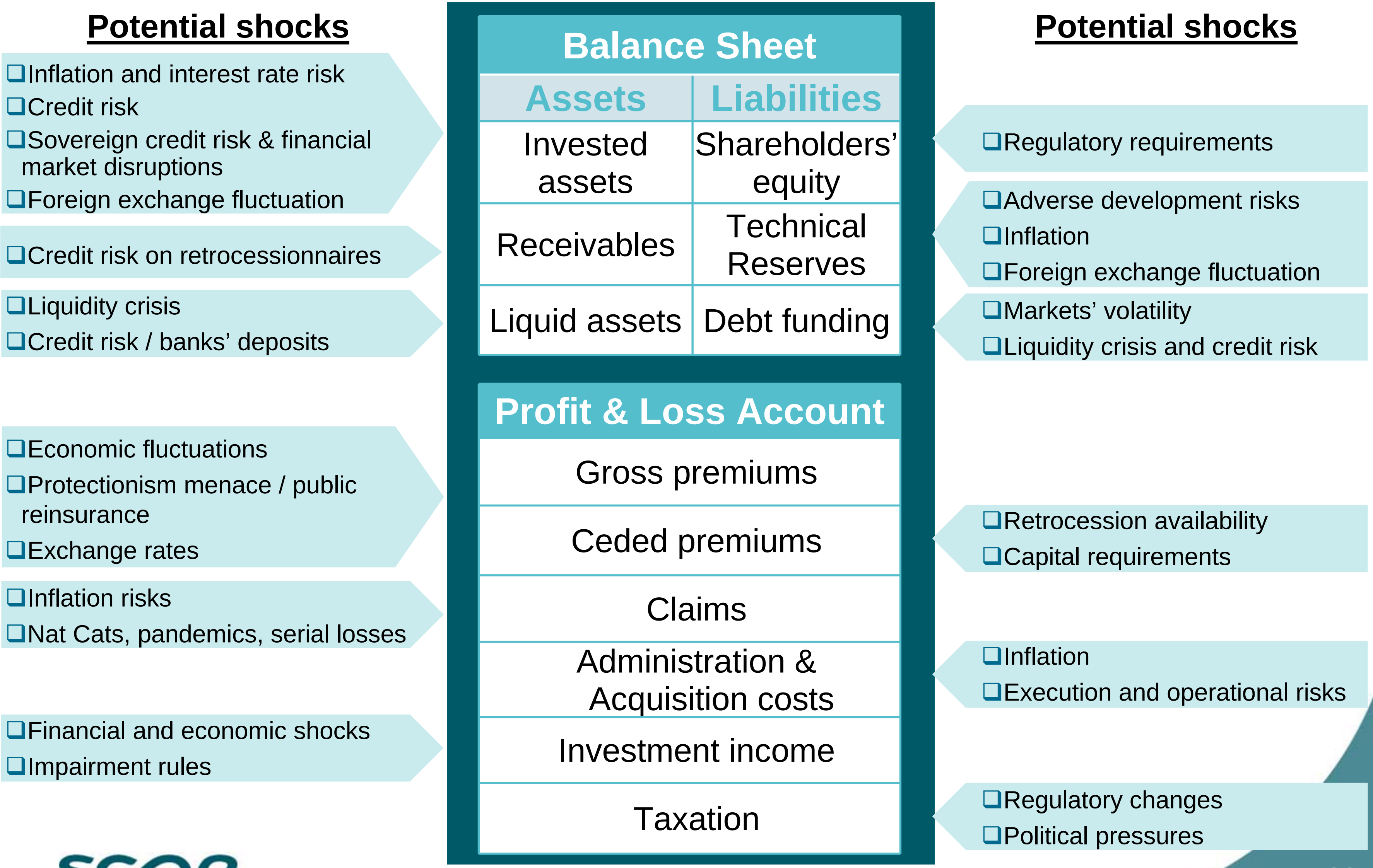


Source : IMF (2009) : “World Economic Outlook”

IV. Potential consequences of these three main risks on mature insurance markets

Risk	Significant consequences on (re)insurance assets	Significant consequences on (re)insurance liabilities
Non sustainability of recovery	➔ Persistence of low interest rates ➔ Increased credit spreads ➔ Volatility of equity markets ➔ Real estate market stagnation	➔ Progressive slowdown of the LoBs most elastic to growth (workers compensation, transport, construction, business solutions, credit & surety)
Public debt bubble	➔ Increase of interest rates on govies ➔ Depreciation of portfolio of fixed govies, especially long maturities ➔ Large FX movements induced by anticipated downgrades	➔ Depreciation of discounted reserves (Life & third party liability) ➔ Capital release for non discounted reserves (P&C)
Inflationary pressures	➔ Potential increase of all interest rates (nominal and eventually real) ➔ Depreciation of existing portfolio of fixed bonds (both corporate and govies) ➔ Temporary pressures on equity markets ➔ Large FX movements induced by inflation gaps	➔ Inflation of P&C claims ➔ Inflation in P&C reserves (with an elasticity of 1.5 to current inflation) ➔ Long tail LoBs most affected ➔ Decrease of discounted reserves (Life & third party liability) ➔ Capital release for non discounted P&C reserves

IV. Potential shocks impacting the (re)insurance company’s financials in multiple ways



Potential shocks

☐Inflation and interest rate risk
☐Credit risk
☐Sovereign credit risk & financial market disruptions
☐Foreign exchange fluctuation

☐Credit risk on retrocessionnaires

☐Liquidity crisis
☐Credit risk / banks’ deposits

☐Economic fluctuations
☐Protectionism menace / public reinsurance
☐Exchange rates

☐Inflation risks
☐Nat Cats, pandemics, serial losses

☐Financial and economic shocks
☐Impairment rules

Balance Sheet

Assets	Liabilities
Invested assets	Shareholders’ equity
Receivables	Technical Reserves
Liquid assets	Debt funding

Profit & Loss Account

Gross premiums
Ceded premiums
Claims
Administration & Acquisition costs
Investment income
Taxation

Potential shocks

☐Regulatory requirements

☐Adverse development risks
☐Inflation
☐Foreign exchange fluctuation

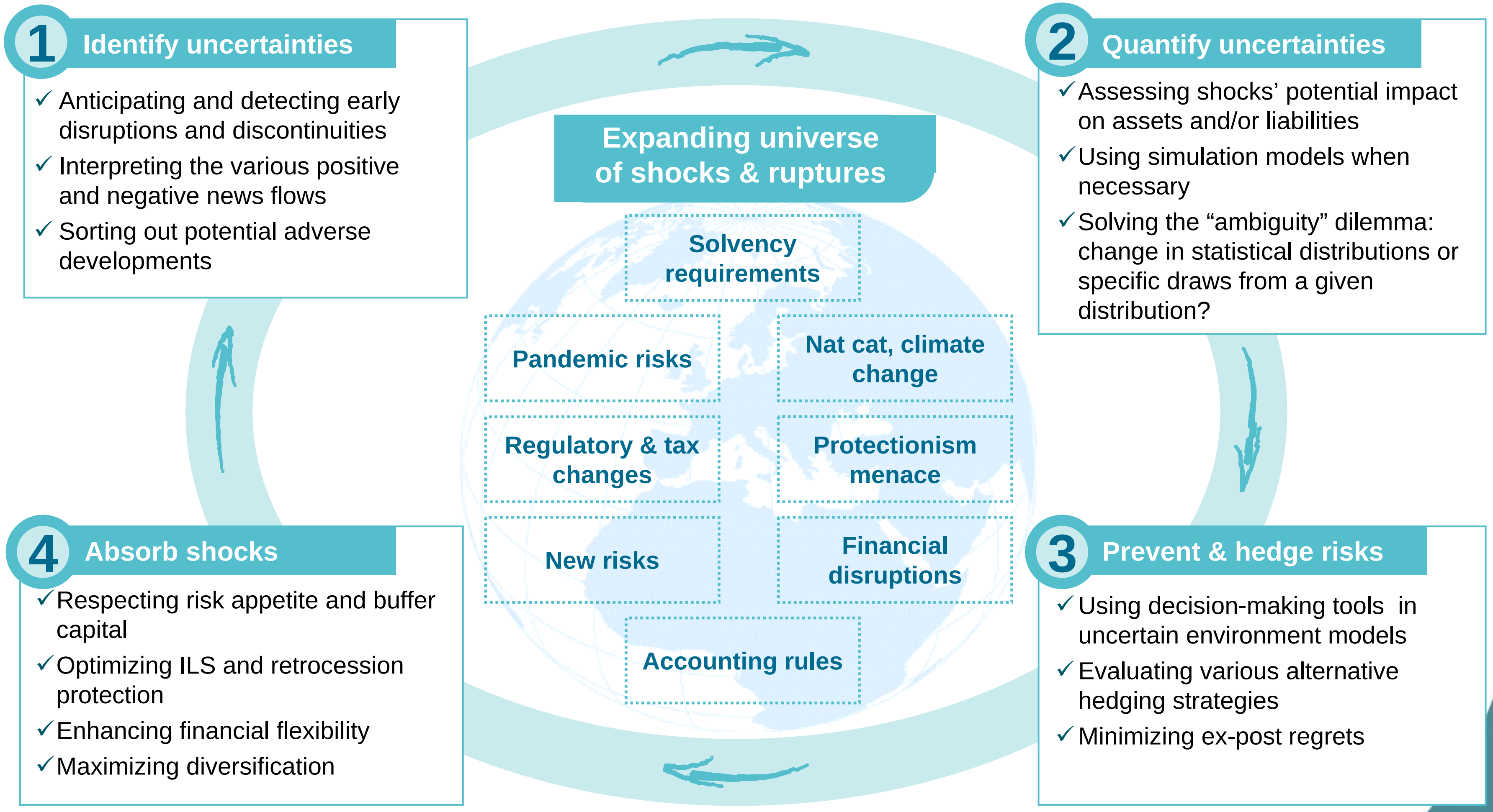
☐Markets’ volatility
☐Liquidity crisis and credit risk

☐Retrocession availability
☐Capital requirements

☐Inflation
☐Execution and operational risks

☐Regulatory changes
☐Political pressures

IV. Entering an environment where managing risks and absorbing shocks is crucial



1 Identify uncertainties

- ✓ Anticipating and detecting early disruptions and discontinuities
- ✓ Interpreting the various positive and negative news flows
- ✓ Sorting out potential adverse developments

2 Quantify uncertainties

- ✓ Assessing shocks' potential impact on assets and/or liabilities
- ✓ Using simulation models when necessary
- ✓ Solving the "ambiguity" dilemma: change in statistical distributions or specific draws from a given distribution?

3 Prevent & hedge risks

- ✓ Using decision-making tools in uncertain environment models
- ✓ Evaluating various alternative hedging strategies
- ✓ Minimizing ex-post regrets

4 Absorb shocks

- ✓ Respecting risk appetite and buffer capital
- ✓ Optimizing ILS and retrocession protection
- ✓ Enhancing financial flexibility
- ✓ Maximizing diversification

Expanding universe of shocks & ruptures

- Solvency requirements
- Pandemic risks
- Nat cat, climate change
- Regulatory & tax changes
- Protectionism menace
- New risks
- Financial disruptions
- Accounting rules

V. What are the long term prospects for the insurance and reinsurance industry? (1)

- The short term difficulties the insurance industry has been experiencing in the US and Europe since the start of the crisis should not mask **some positive long term trends**:
  - The **overall demand for insurance is likely to increase over time**. This is a well-known paradox according to which the elasticity of insurance to GDP is significantly superior to 1. Relative risk aversion increases with GDP, which seems counterintuitive. The median risk aversion is also likely to increase because of the aging of population
  - The **enduring crisis of the Welfare State** in mature markets will rebalance positively the respective role of insurance market and government schemes. This evolution is already underway in many countries
  - At the same time, **the universe of risks is still expanding**. The traditional risks are still present and there are permanently new risks which emerge, in all domains: insurance raw material keeps growing

V. What are the long term prospects for the insurance and reinsurance industry? (2)

- When you combine the two trends, one can **anticipate an increasing demand for insurance** to protect both the material wealth, the human capital and the coverage of liability

  Questions arise more on the supply side:

  - **How to meet this increased demand while meeting profitability and solvency requirements?**
  - **Can the market absorb ever increasing losses and shocks due to the increasing size of risks?**
  - **Will the regulatory developments limit the capacity of the insurance and reinsurance industry by increasing its capital intensity?**
  - **How to design and implement efficient Public-Private partnerships to offer wider insurance coverage, notably in the area of natural catastrophes?**

CONCLUSION

- **Decision making in a time of high uncertainties is management’s most difficult task. We have definitely entered in a stochastic world, more unstable, subject to numerous shocks.**

- **The rational behaviour is to assess potential economic and financial scenarios and identify the associated risks, then to evaluate the costs of hedging these risks.**

- **Prudence and caution remain the key attitudes to adopt in troubled times. This has been SCOR’s policy throughout the recent years explaining the positive development of the company which increased its premium income, maintained its profitability with low volatility and reinforced its solvency.**

SCOR

wishes best success to all
Asian insurers